BUTTERFLY VALVES

For the Owner and the Installing Contractor

ASAHI AV

User's Guide

Serial No.: UA-003E

Read and use the information contained within these documents.

This User's Guide contains information important to the proper installation, maintenance and safe use of the BUTTERFLY VALVES store in an easily accessible location.

Warning & Caution Signs

Warning	This symbol reminds the user to take caution due to the potential for serious injury or death.
Caution	This symbol reminds the user to take caution due to the potential for damage to the valve if used in such a manner.

Prohibited & Mandatory Action Signs

	Prohibited: When operating the valve, this symbol indicates an action that should not be taken.
	Mandatory action: When operating the valve, this symbol indicates mandatory actions that must be adhered to.

General Information for Transportation, Unpacking and Storage

Warning

-When suspending and supporting a valve, take care and do not stand under a suspended valve.

Caution

-This valve is not designed to handle impacts of any kind. Avoid throwing or dropping the valve.
-Avoid scratching the valve with any sharp object.
-Do not over-stack cardboard shipping boxes. Excessively stacked packages may collapse.
-Avoid contact with any coal tar creosote, insecticides, vermicides or paint.
(The force of swelling may damage the valve.)
-When transporting a valve, do not carry it by the handle.

-Store products in their corrugated cardboard boxes. Avoid exposing products to direct sunlight, and store them indoors (at room temperature). Also avoid storing products in areas with excessive temperatures.
(Corrugated cardboard packages become weaker as they become wet with water or other liquid. Take care in storage and handling.)
-After unpacking the products, check that they are defect-free and meet the specifications.

Inspection Items

Caution

- ☐ Check for flaw, crack, or deformation on the valve.
- ☐ Check for leaks to the outside or inside.
- ☐ Check for the smoothness of handle operation.
- ☐ Check that all fasteners are tight.
- ☐ Ensure that the seat flange is not excessively protruded or retracted.

General Operating Instructions

Warning

-Using a positive-pressure gas with our plastic piping may pose a dangerous condition due to the repellent force particular to compressible fluids even when the gas is under similar pressures used for liquids. Therefore, be sure to take the necessary safety precautions such as covering the piping with protective material. For inquiries, please contact us. For conducting a leak test on newly installed piping, be sure to check for leaks under water pressure. If absolutely necessary to use a gas in testing, please consult your nearest service station beforehand.
-Be sure to conduct a safety check on all hand and power tools to be used before beginning work.
-Wear protective gloves and safety goggles as fluid remain in the valve even if the pipeline is empty.
(You may be injured.)
-When installing the BUTTERFLY VALVE TYPE 55, the AV gasket is basically unnecessary. But using a gasket gives more stable sealing ability in case of using a plastic flange, where easy occurrence of dent, mark or distortion can be expected.

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General Operating Instructions

Caution

-Do not step on or apply excessive weight on valve. (It can be damaged.)
-When installing a pipe support by means of a U-band or something similar, take care not to overtighten it. (Excessive tension may damage it.)
-The installed valve must never be opened or closed when foreign matter such as sand is present in the pipeline.
-Do not use the valve in conditions where the fluid may have crystallized. (The valve will not operate properly.)
-Do not use the valve to fluid containing slurry. (The valve will not operate properly.)

-Before opening or closing a lubricant free product, be sure to apply water.
-Keep the valve away from excessive heat or fire. (It can be damaged, or destroyed.)
-Always operate the valve within the pressure vs. temperature range. (The valve can be damaged or deformed by operating beyond the allowable range.)
-Select a valve material that is compatible with the media. For chemical resistance information, refer to “CHEMICAL RESISTANCE ON ASAHI AV VALVE”. (Some chemicals may damage incompatible valve materials.)
-Allow sufficient space for maintenance and inspection.
-Keep the valve out of direct sunlight, water and dust. Use cover to shield the valve. (The valve will not operate properly.)
-Perform periodic maintenance. (Leakage may develop due to temperature changes or periods of prolonged storage, rest, or operation.)
-When operating the handle, be sure to do so with your hand. (Using a tool may damage the handle.)
-Gear Operator Operation; We utilize a self-locking worm gear design on our manual operators. This design allows flow control of the valve in intermediate positions in normal process conditions. In applications where very high velocity, turbulence flow or vibration is present and an intermediate setting is required. It is recommended to install a locking device. The locking device will prevent the possibility of the valve drifting in severe conditions from it’s original intermediate setting.

Installation Procedure

BUTTERFLY VALVE TYPE57
(40mm(1 1/2")-200mm(8"):Lever type, 40mm(1 1/2")-350mm(14"): Gear type)
BUTTERFLY VALVE TYPE56
(400mm(16"): Gear type)
BUTTERFLY VALVE TYPE75
(450mm(18")-600mm(24"): Gear type)
BUTTERFLY VALVE TYPE55
(50mm(2")-125mm(5"): Lever type, 50mm(2")-250mm(10"): Gear type)
Refer to the following details.

Warning

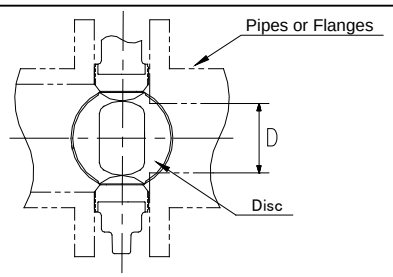
-The gasket is un-necessary. (The seat carries out of the role of the gasket) But when installing the BUTTERFLY VALVE TYPE 55, using a gasket gives more stable sealing ability in case of using a plastic flange, where easy occurrence of dent, mark or distortion can be expected.

Caution

-When installing pipes and valves, ensure that they are not subjected to tension, compression, bending, impact, or other excessive stress.

-Use flat faced flanges for connection to AV Valves.
-Ensure that the mating flanges are of the same standards.
-When installing the piping, do not do so with the valves fully closed. (The disc may pinch into the seat, resulting in a high operating torque, thus disabling opening and closing.)
-Care must be used during piping installation to ensure that the pipes or flanges are properly aligned so that the valve disc does not contact them in any setting. Misalignment as in Figure bellow will result in damage to the valve.(Fig.1)

Fig.1



<Inside Diameter of the Connection Part>

Nominal Size mm（inch）	Diameter D mm（inch）	
	Butterfly valve Type57, 56, 75	Butterfly valve Type55
40 (1 1/2")	31 (1.22")	-
50 (2")	43 (1.69")	43 (1.69")
65 (2 1/2")	57 (2.24")	-
80 (3")	67 (2.64")	68 (2.68")
100 (4")	91 (3.58")	89 (3.50")
125 (5")	113 (4.45")	116 (4.57")
150 (6")	137 (5.39")	140 (5.51")
200 (8")	179 (7.05")	177 (6.97")
250 (10")	231 (9.09")	234 (9.21")
300 (12")	280 (11.02")	-
350 (14")	333 (13.11")	-
400 (16")	366 (14.41")	-
450 (18")	419 (16.50")	-
500 (20")	469 (18.46")	-
600 (24")	569 (22.40")	-

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Caution

-The valve disc is in the position indicated by solid lines in figure to the right prior to shipment from the factory. If the valve is opened or closed after unpacking, it must be reset in this position before installation. Failure to do so will result in damage to the surface of the valve seat during handling and installation.

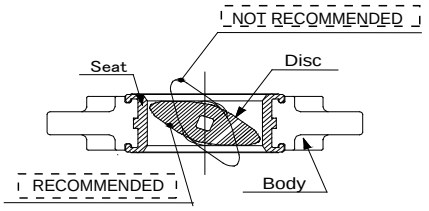
-The parallelism and axial misalignment of the flange surface should be under the values shown in the following table to prevent damage the valve. (A failure to follow these values can cause destruction due to stress application to the piping.)

-When you insert a valve between flanges, please insert after extending the fields of flanges fully. (If you insert a valve by force without fully extending fields of flanges, a liner may be turned over and suffer a crack.)(Fig.3)

-Tighten the bolts and nuts gradually with a torque wrench in a diagonal manner.

1. Install the valve between flanges and open the valve slightly.(Fig.5)
2. Cleaning: Confirm the flange face area is clean and free of dirt or foreign materials.
3. Insert bolts, set nuts and washer and tighten the bolts and nuts temporarily by hand. Tighten the bolts and nuts gradually with torque wrench to the specified torque in a diagonal manner.

Fig.2



<Axial Misalignment & Parallelism> Unit: mm(inch)

Nominal Size	Axial Mialignment	Parallelism(a-b)
40-80 (1 1/2"-3)	1.0 (0.04")	0.8 (0.03")
100-150 (4"-6")	1.0 (0.04")	1.0 (0.04")
200-600 (8"-16")	1.5 (0.06")	1.0 (0.04")

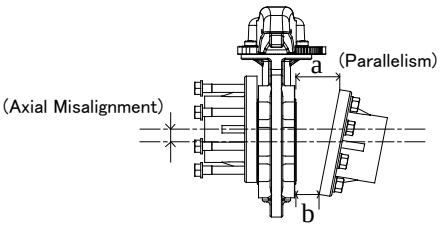


Fig.3

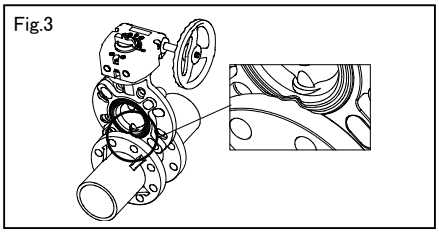


Fig.4

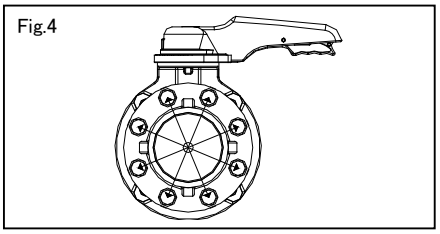
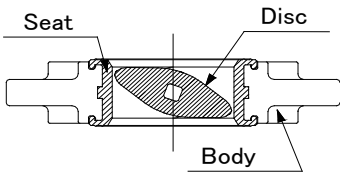


Fig.5



<Recommended torque value>

Nominal Size	40	50, 65	80, 100	125, 150	200, 250	300, 350	400, 450	500, 600
mm (inch)	(1 1/2")	(2", 2 1/2")	(3", 4")	(5", 6")	(8", 10")	(12", 14")	(16", 18")	(20", 24")
Torque value	20.0	22.5	30.0	40.0	55.0	60.0	80.0	100.0
N·m (lb·inch)	(177)	(200)	(266)	(355)	(488)	(532)	(710)	(888)

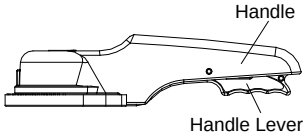
Operating Procedure

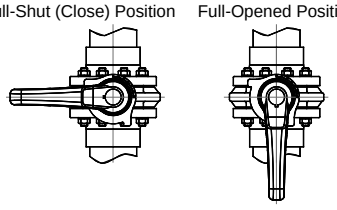
Caution

-When operating the handle, be sure to do so with your hand.

Lever Type Nominal Size: 40-200mm (1 1/2"-8")

In case of Lever Type, the direction of handle is same as the disc.





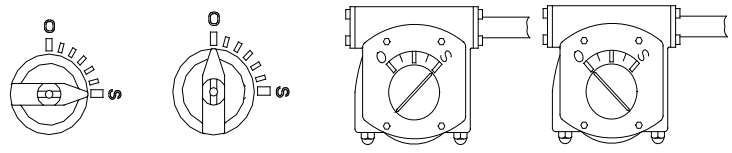
<Handle Lock>

The location hole for the lock is already installed in the handle.
(Size: 6mm(0.24")-7mm(0.28"))

Ex.

Gear Type Nominal Size: 40-600mm (1 1/2"-24")

In case of Gear Type, the indicator shows the position of the disc on the top of gear box.
For the full-shut (close) position, the indication shows Shut (S).
For the full-opened position, the indication shows Open (O).



Full-Shut (Close) Position Full-Opened Position Full-Shut (Close) Position Full-Opened Position

<Locking Device (Option)>

Ex.

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Handling of Residual and Waste Materials

Warning Make sure to consult a waste treatment dealer for recommendations on the proper disposal of plastic valves.
(Poisonous gas is generated when the valve is burned improperly.)

Product Warranty

Be sure to read the following description of our product warranty.

- Always observe the specifications of and the precautions and instructions on using our product.
- We always strive to improve product quality and reliability, but cannot guarantee perfection.Therefore, should you intend to use this product with any equipment or machinery that may pose the risk of serious or even fatal injury, or property damage, ensure an appropriate safety design or take other measures with sufficient consideration given to possible problems. We shall assume no responsibility for any inconvenience stemming from any action on your part without our written consent in the form of specifications or other documented approval.
- The related technical documents, operation manuals, and other documentation prescribe precautions on selecting, constructing, installing, operating, maintaining, and servicing our products.
For details, consult with our nearest distributor or agent.
- Our product warranty extends for one and a half years after the product is shipped from our factory or one year after the product is installed, whichever comes first. Any product abnormality that occurs during the warranty period or which is reported to us will be investigated immediately to identify its cause. Should our product be deemed defective, we shall assume the responsibility to repair or replace it free of charge.
- Any repair or replacement needed after the warranty period ends shall be charged to the customer.
- The warranty does not cover the following cases:

(1) Using our product under any condition not covered by our defined scope of warranty.
(2) Failure to observe our defined precautions or instructions regarding the construction, installation, handling, maintenance, or servicing of our product.
(3) Any inconvenience caused by any product other than ours.
(4) Remodeling or otherwise modifying our product by anyone other than us.
(5) Using any part of our product for anything other than the intended use of the product.
(6) Any abnormality that occurs due to a natural disaster, accident, or other incident not stemming from something inside our product.

Inquiries

As for details, refer to the User's manual.

BUTTERFLY VALVE TYPE57 : H-V036
BUTTERFLY VALVE TYPE56 : H-V030
BUTTERFLY VALVE TYPE75 : H-V030
BUTTERFLY VALVE TYPE55 : H-V029

ASAHI ORGANIC CHEMICALS INDUSTRY CO.,LTD.

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